

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1

1 1. **(Currently amended)** A flow divider for receiving fluent matter from at least one
2 source and dividing the fluent matter substantially equally among a plurality of
3 destinations, the flow divider comprising:

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(a) a housing;

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(b) a first chamber in the housing, the first chamber being defined by a first

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radially inwardly facing surface and a first wall, the first chamber having an inlet

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cavity formed in the first radially inwardly facing surface, wherein the inlet cavity

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is in fluid communication with a source passage that is formed through the

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housing and is spaced from the chamber, and the source passage has an axis that

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is substantially parallel to the axis of the first radially inwardly facing surface and

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is in fluid communication with said at least one source, the chamber also having

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and an outlet cavity formed in the first radially inwardly facing surface in fluid

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communication with a first one of said plurality of destinations;

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(c) a first cylindrical hub rotatably mounted in the first chamber and having an

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axis substantially parallel to the axis of the first radially inwardly facing surface, a

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first radial slot extending through the first hub, and a second radial slot extending

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through the first hub transverse to the first slot;

18 (d) a first vane slidably mounted in the first slot and having opposite vane ends
19 seating against the first radially inwardly facing surface;

20 (e) a second vane slidably mounted in the second slot and having opposite vane
21 ends seating against the first radially inwardly facing surface;

22 (f) a second chamber in the housing, the second chamber being defined by a
23 second radially inwardly facing surface and a second wall that separates the first
24 chamber from the second chamber, the second chamber having an inlet cavity
25 formed in the second radially inwardly facing surface, wherein the inlet cavity is
26 in fluid communication with the source passage and is in fluid communication
27 with said at least one source, the second chamber also having and an outlet cavity
28 formed in the second radially inwardly facing cylindrical surface in fluid
29 communication with a second one of said plurality of destinations;

30 (g) a second cylindrical hub rotatably mounted at least partially through the
31 second wall and extending into~~in~~ the second chamber and having an axis
32 substantially parallel to the axis of the second radially inwardly facing surface and
33 drivingly linked to the first hub, a third radial slot extending through the second
34 hub, and a fourth radial slot extending through the second hub transverse to the
35 third slot;

36 (h) a third vane slidably mounted in the third slot and abutting the second radially
37 inwardly facing surface at opposite vane ends; and

38 (i) a fourth vane slidably mounted in the fourth slot and abutting the second
39 radially inwardly facing surface at opposite vane ends.

1 2. **(Currently amended)** The flow divider in accordance with claim 1, further
2 comprising:

3 (a) a third chamber in the housing, the third chamber being defined by a third
4 radially inwardly facing surface and a third wall that separates the second
5 chamber from the third chamber, the third chamber having an inlet cavity formed
6 in the third radially inwardly facing surface, wherein the inlet cavity is in fluid
7 communication with the source passage, the second chamber also having in fluid
8 ~~communication with said at least one source and~~ an outlet cavity formed in the
9 third radially inwardly facing cylindrical surface in fluid communication with a
10 third one of said plurality of destinations;

11 (b) a third cylindrical hub rotatably mounted at least partially through the third
12 wall and extending into~~in~~ the third chamber and having an axis substantially
13 parallel to the axis of the third radially inwardly facing surface and drivingly
14 linked to the second hub, a fifth radial slot extending through the third hub, and a
15 sixth radial slot extending through the third hub transverse to the fifth slot;

16 (c) a fifth vane slidably mounted in the fifth slot and abutting the third radially
17 inwardly facing surface at opposite vane ends; and

18 (d) a sixth vane slidably mounted in the sixth slot and abutting the third radially
19 inwardly facing surface at opposite vane ends.

1 3. **(Currently amended)** The flow divider in accordance with claim 1, wherein the
2 housing, hubs and vanes ~~can all be~~ have connecting structures that permit them to be
3 disconnected and disassembled for cleaning.

1 4. **(Cancelled)**

1 5. **(Cancelled)**

1 6. **(Original)** The flow divider in accordance with claim 1, wherein said first and second
2 hubs are drivingly linked by at least one protrusion extending from the second hub into at
3 least one corresponding recess formed in the first hub.

1 7. **(Original)** The flow divider in accordance with claim 6, wherein said at least one
2 protrusion further comprises at least one longitudinal tang extending from one end of the
3 second hub, and said corresponding recess further comprises at least one longitudinal slot
4 formed in one end of the first hub.

1 8. **(Original)** The flow divider in accordance with claim 1, further comprising a first end
2 cap mounted to a first end of the housing, and a second end cap mounted to a second,
3 opposite end of the housing, said end caps forming closures for the chambers.

1 9. **(Original)** The flow divider in accordance with claim 8, wherein said first end cap has
2 a recess for receiving at least one protrusion formed on one of said hubs.

1 10. **(Original)** The flow divider in accordance with claim 9, wherein each of said hubs
2 has a reduced-diameter necked region forming a shoulder, and an aperture is formed in
3 each wall at each chamber for rotatably receiving said necked region of a corresponding
4 hub.

1 11. **(Currently amended)** A flow divider for receiving fluent matter from at least one
2 source and dividing the fluent matter substantially equally among a plurality of
3 destinations, the flow divider comprising:

4 (a) a first housing with a first chamber defined by a first radially inwardly facing
5 cylindrical surface and a first wall, the first chamber having an inlet cavity formed
6 in the first radially inwardly facing cylindrical surface, wherein the inlet cavity is
7 in fluid communication with a corresponding source passage that is formed
8 through the first housing and is spaced from the first chamber, and the source
9 passage has an axis that is substantially parallel to the axis of the first radially
10 inwardly facing cylindrical surface and is in fluid communication with said at
11 least one source, the first chamber also having ~~and~~ an outlet cavity formed in the
12 first radially inwardly facing cylindrical surface in fluid communication with a
13 first one of said plurality of destinations;

14 (b) a first cylindrical hub rotatably mounted in the first chamber substantially
15 coaxial with the radially inwardly facing cylindrical surface, a first radial slot
16 extending through the first hub, and a second radial slot extending through the
17 first hub transverse to the first slot;

18 (c) a first vane slidably mounted in the first slot and having opposite vane ends
19 seating against the first radially inwardly facing cylindrical surface;

20 (d) a second vane slidably mounted in the second slot and having opposite vane
21 ends seating against the first radially inwardly facing cylindrical surface;

22 (e) a second housing rigidly mounted to the first housing, the second housing
23 having a second chamber defined by a second radially inwardly facing cylindrical
24 surface and a second wall that separates the first chamber from the second
25 chamber, the second chamber having an inlet cavity formed in the second radially
26 inwardly facing cylindrical surface, wherein the inlet cavity is in fluid
27 communication with a corresponding source passage that is formed through the
28 second housing and is spaced from the second chamber, and the source passage
29 has an axis that is substantially parallel to the axis of the second radially inwardly
30 facing cylindrical surface and is in fluid communication with said at least one
31 source, the chamber also having and an outlet cavity formed in the second radially
32 inwardly facing cylindrical surface in fluid communication with a second one of
33 said plurality of destinations;

34 (f) a second cylindrical hub rotatably mounted at least partially through the
35 second wall and extending into the second chamber, and having an axis that is

36 substantially parallel to the axis of the second radially inwardly facing cylindrical
37 surface and drivingly linked to the first hub, a third radial slot extending through
38 the second hub, and a fourth radial slot extending through the second hub
39 transverse to the third slot;
40 (g) a third vane slidably mounted in the third slot and abutting the second radially
41 inwardly facing cylindrical surface at opposite vane ends; and
42 (h) a fourth vane slidably mounted in the fourth slot and abutting the second
43 radially inwardly facing cylindrical surface at opposite vane ends;
44 wherein the source passages formed through each of said housings align to form a
45 conduit in fluid communication with each inlet cavity and said at least one source.

1 12. **(Currently amended)** The flow divider in accordance with claim 11, further
2 comprising:

3 (a) at least a third housing rigidly mounted to the second housing, the third
4 housing having a third chamber defined by a third radially inwardly facing
5 cylindrical surface and a third wall that separates the second chamber from the
6 third chamber, the third chamber having an inlet cavity formed in the third
7 radially inwardly facing cylindrical surface, wherein the inlet cavity is in fluid
8 communication with a corresponding source passage formed through the third
9 housing and is spaced from the third chamber, and the source passage has an axis
10 that is substantially parallel to the axis of the third radially inwardly facing
11 cylindrical surface and is in fluid communication with said at least one source,

12 and the chamber also having and an outlet cavity formed in the third radially
13 inwardly facing cylindrical surface in fluid communication with a third one of
14 said plurality of destinations;
15 (b) a third cylindrical hub rotatably mounted at least partially through the third
16 wall and extending into the third chamber, and having an axis substantially
17 parallel to the axis of the third radially inwardly facing cylindrical surface and
18 drivingly linked to the second hub, a fifth radial slot extending through the third
19 hub, and a sixth radial slot extending through the third hub transverse to the fifth
20 slot;
21 (c) a fifth vane slidably mounted in the fifth slot and abutting the third radially
22 inwardly facing cylindrical surface at opposite vane ends; and
23 (d) a sixth vane slidably mounted in the sixth slot and abutting the third radially
24 inwardly facing cylindrical surface at opposite vane ends.

1 13. **(Currently amended)** The flow divider in accordance with claim 11, wherein the
2 housings, hubs and vanes ~~can all be~~ have connecting structures that permit them to be
3 disconnected and disassembled for cleaning.

1 14. **(Cancelled)**

1 15. **(Cancelled)**

1 16. **(Original)** The flow divider in accordance with claim 11, wherein said first and
2 second hubs are drivingly linked by at least one protrusion extending from the second
3 hub into at least one corresponding recess formed in the first hub.

1 17. **(Original)** The flow divider in accordance with claim 16, wherein said at least one
2 protrusion further comprises a pair of longitudinal tangs extending from one end of the
3 second hub, and said corresponding recess further comprises a pair of longitudinal slots
4 formed in one end of the first hub.

1 18. **(Original)** The flow divider in accordance with claim 11, further comprising a first
2 end cap mounted to a first end of the housings, and a second end cap mounted to a
3 second, opposite end of the housings, said end caps forming closures for the chambers.

1 19. **(Original)** The flow divider in accordance with claim 18, wherein said first end cap
2 has a recess for receiving at least one protrusion formed on one of said hubs.

1 20. **(Currently amended)** The flow divider in accordance with claim 19, wherein each
2 of said hubs has a reduced-diameter necked region forming a shoulder, and an aperture is
3 formed in each wall of each ~~chamber~~ housing for rotatably receiving said necked region
4 of a corresponding hub.

1 21. **(Original)** The flow divider in accordance with claim 11, wherein each of the
2 housings has a tab on one end and a notch on an opposite end for matingly engaging a
3 notch and a tab, respectively, on adjacent structures.

1 22. **(Currently amended)** A device for receiving fluent matter from a plurality of
2 sources and combining the fluent matter substantially equally to at least one destination,
3 the device comprising:

4 (a) a housing;

5 (b) a first chamber in the housing, the first chamber being defined by a first
6 radially inwardly facing surface and a first wall, the first chamber having an inlet
7 cavity formed in the first radially inwardly facing surface in fluid communication
8 with a first one of said plurality of sources and an outlet cavity formed in the first
9 radially inwardly facing surface, wherein the outlet cavity is in fluid
10 communication with a destination passage that is formed through the housing and
11 is spaced from the first chamber, and the destination passage has an axis that is
12 substantially parallel to the axis of the first radially inwardly facing surface and is
13 in fluid communication with said at least one destination;

14 (c) a first cylindrical hub rotatably mounted in the first chamber and having an
15 axis substantially parallel to the axis of the first radially inwardly facing surface, a
16 first radial slot extending through the first hub, and a second radial slot extending
17 through the first hub transverse to the first slot;

18 (d) a first vane slidably mounted in the first slot and having opposite vane ends
19 seating against the first radially inwardly facing surface;

20 (e) a second vane slidably mounted in the second slot and having opposite vane
21 ends seating against the first radially inwardly facing surface;

22 (f) a second chamber in the housing, the second chamber being defined by a
23 second radially inwardly facing surface and a second wall that separates the first
24 chamber from the second chamber, the second chamber having an inlet cavity
25 formed in the first radially inwardly facing surface in fluid communication with a
26 second one of said plurality of sources and an outlet cavity formed in the second
27 radially inwardly facing surface, wherein the outlet cavity is in fluid
28 communication with the destination passage ~~in fluid communication with said at~~
29 ~~least one destination~~;

30 (g) a second cylindrical hub rotatably mounted at least partially through the
31 second wall and extending into ~~in~~ the second chamber and having an axis
32 substantially parallel to the axis of the second radially inwardly facing surface and
33 drivingly linked to the first hub, a third radial slot extending through the second
34 hub, and a fourth radial slot extending through the second hub transverse to the
35 third slot;

36 (h) a third vane slidably mounted in the third slot and abutting the second radially
37 inwardly facing surface at opposite vane ends; and

38 (i) a fourth vane slidably mounted in the fourth slot and abutting the second
39 radially inwardly facing surface at opposite vane ends.

1 23. **(Currently amended)** The device in accordance with claim 22, further comprising:
2 (a) a third chamber in the housing, the third chamber being defined by a third
3 radially inwardly facing surface and a third wall that separates the second
4 chamber from the third chamber, the third chamber having an inlet cavity formed
5 in the third radially inwardly facing surface in fluid communication with a third
6 one of said plurality of sources and an outlet cavity formed in the third radially
7 inwardly facing surface, wherein the outlet cavity is in fluid communication with
8 the destination passage ~~in fluid communication with said at least one destination;~~
9 (b) a third cylindrical hub rotatably mounted at least partially through the third
10 wall and extending into the third chamber and having an axis substantially
11 parallel to the axis of the third radially inwardly facing surface and drivingly
12 linked to the second hub, a fifth radial slot extending through the third hub, and a
13 sixth radial slot extending through the third hub transverse to the fifth slot;
14 (c) a fifth vane slidably mounted in the fifth slot and abutting the third radially
15 inwardly facing surface at opposite vane ends; and
16 (d) a sixth vane slidably mounted in the sixth slot and abutting the third radially
17 inwardly facing surface at opposite vane ends.

1 24. **(Currently amended)** The device in accordance with claim 22, wherein the housing,
2 hubs and vanes ~~can all be~~ have connecting structures that permit them to be disconnected
3 and disassembled for cleaning.

1 25. **(Cancelled)**

1 26. **(Cancelled)**

1 27. **(Original)** The device in accordance with claim 22, wherein said first and second
2 hubs are drivingly linked by at least one protrusion extending from the second hub into at
3 least one corresponding recess formed in the first hub.

1 28. **(Original)** The device in accordance with claim 27, wherein said at least one
2 protrusion further comprises at least one longitudinal tang extending from one end of the
3 second hub, and said corresponding recess further comprises at least one longitudinal slot
4 formed in one end of the first hub.

1 29. **(Original)** The device in accordance with claim 22, further comprising a first end
2 cap mounted to a first end of the housing, and a second end cap mounted to a second,
3 opposite end of the housing, said end caps forming closures for the chambers.

1 30. **(Original)** The device in accordance with claim 29, wherein said first end cap has a
2 recess for receiving at least one protrusion formed on one of said hubs.

1 31. **(Original)** The device in accordance with claim 30, wherein each of said hubs has a
2 reduced-diameter necked region forming a shoulder, and an aperture is formed in the wall
3 at each chamber for rotatably receiving said necked region of a corresponding hub.

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